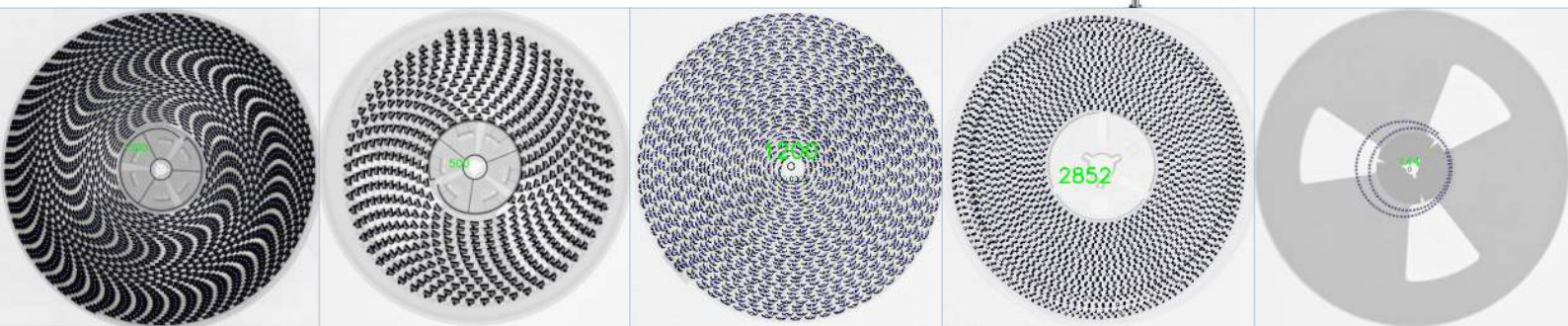


NEW

Full Automatic Counting Machine
XC2000



SMD COMPONENT X RAY COUNTER

Shenzhen Zhuomao Technology Co.,Ltd
SEAMARK ZM Technology Group(HK)Co.,Ltd



X1000



Application Advantage

- ◆ Referring ergonomic design, sitting operation, monitor and eye height is equal, protect the cervical spine and fatigue.
- ◆ Automatic drawer in and out, easy to take materials, grating automatic induction, torque control, anti pinch.
- ◆ Erro-proof function for labeling, automatic recognize each reel by induction function, take any reel the printer will print the corresponding label.
- ◆ Docking with MES / ERP / WMS system, exchange date in real-time, counting result uploading automatically.
- ◆ Small space required and equipped with casters, easy for relocation



XC1100

X-Ray Tube Parameters

X-Ray Tube Type	Reflection sealed micro focus X-Ray source
Voltage Range	20-80KV
Current Range	200-700 μ A
Max Output Power	56 W
Microfocus Size	30~40 μ m

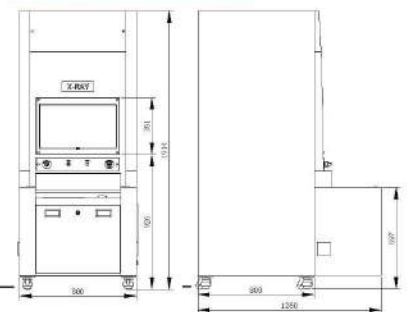
Flat Panel Detector Parameters

Flat Panel Type	Amorphous Silicon Flat Panel Detector
Pixel Matrix	3072 $\times$ 3072
Field of View	427mm $\times$ 427mm
Resolution	3.6lp/mm
Frame Rate (1 $\times$ 1)	6fps
A/D Conversion Bit	16bits

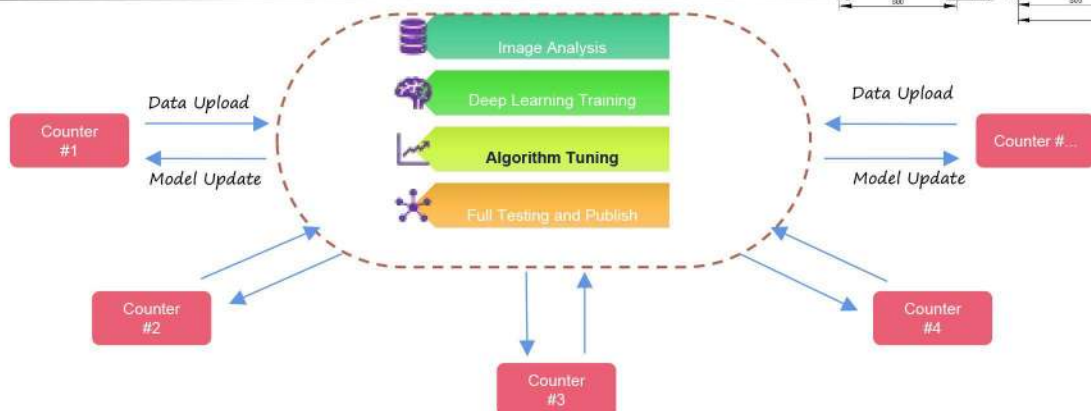
Equipment Performance Parameters

Reel Size	7" -15" Tape Reel
Reel Height	$\leq$ 85mm
Min Component	01005
System Docking	MES/ERP/WMS
Label Printing	TSC Industrial Printer
Input Power	220V 10A/110V 15A 50-60HZ
Control System	Industrial computer win7 (win10 optional) 64 bit

Dimensions



Core Software Algorithm



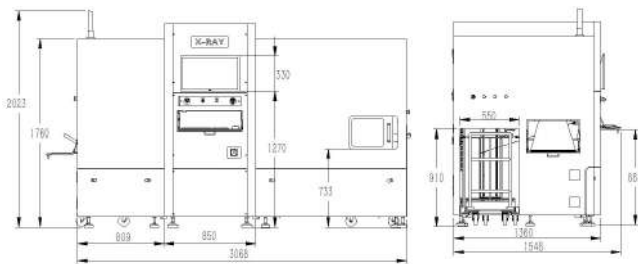


XC2000

Application Advantages

- ◆ Max 200 reels of materials can be placed per time.
- ◆ 31 megapixel camera automatically scans for barcode information and label position.
- ◆ 8 ~ 12 seconds / reel counting speed.
- ◆ Automatic printing and labeling by TSC industrial printer.
- ◆ Docking with MES / ERP / WMS etc system for real-time data exchange.
- ◆ Automatic operation, guaranteed safe operation.

Dimensions



Software Interface

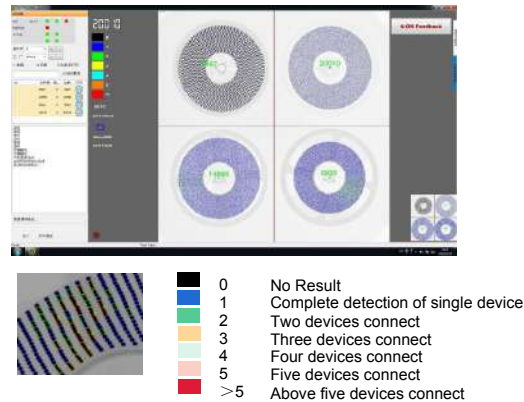


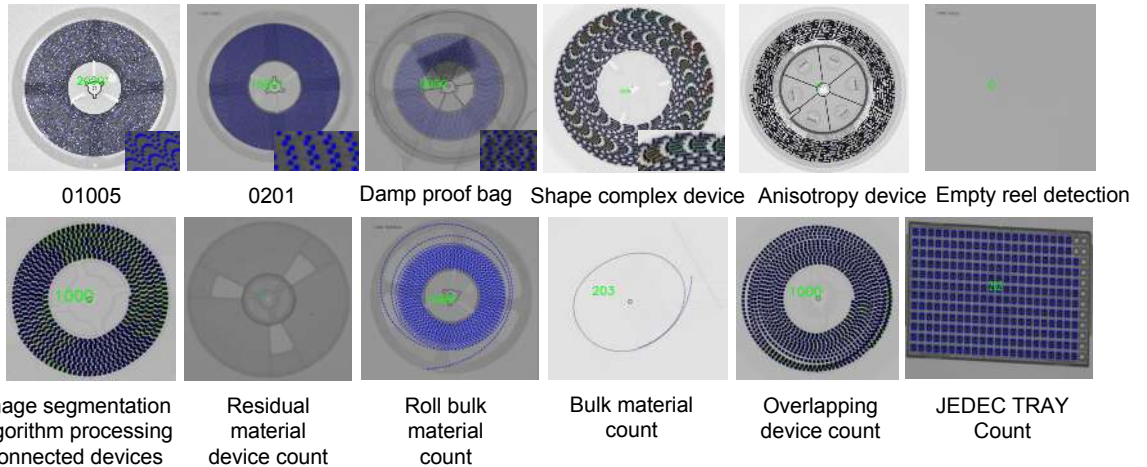
Image Data

We always pay close attention to the global SMT electronic assembly industry, quickly collect the new components, update and process the new component reel required by customers every week, obtain images from the cloud and update the database every month. We have repeatedly tested more than 5000 kinds of devices with different materials, and the global coverage of devices has exceeded 98.7%.

- ◆ The powerful database collects the image data of global counter, including more than 15000 kinds of material information.
- ◆ It has 740000 test images and 190000 core images. Before each software update and release, all test image data have passed the test.
- ◆ After data enhancement, 5.37 million classification training images were obtained, which increased about 120000 images per week. The training and testing time was about 48 hours.
- ◆ Artificial intelligence counting, automatic calculation, software simple and convenient operation, no training costs.
- ◆ Beyond the accuracy of visual recognition, as long as the naked eye can identify, it can ensure the accuracy of point material. It

Parts (inch)	Accuracy	Repeatability	Tested Reels	Parts (inch)	Accuracy	Repeatability	Tested Reels
C01005	100%	100%	572	DPAK series	100%	100%	1142
R01005	99.8%	100%	832	MELF series	100%	100%	704
C0201	100%	100%	11977	Aluminum Caps	100%	100%	1862
R0201	99.9%	100%		SOIC series	100%	100%	4749
C0402	100%	100%	7551	SOT series	100%	100%	7560
R0402	99.9%	100%	7671	BGA/CPU series	100%	100%	1491
C0603	100%	100%	5198	TANT series	100%	100%	6140
R0603	99.9%	100%	5290	Filter series	100%	100%	2873
C0805	100%	100%	3105	Stable	100%	100%	162898
R0805	100%	100%	1723	Others	Unstable	99%	197
CR1206	100%	100%	1338	Count Failed	0%	100%	19

Application cases



Radiation safety



Safety considerations for operators

- ◆ **It has been exempted from filing by the Ministry of ecological environment of the people's Republic of China**
 - ◆ This series of products have obtained the certificate of exemption from the registration of radioisotope and radiation devices issued by the Ministry of ecological environment, with the filing number of [yue fu Huo Bei [2020] No. 0035]. The radiation device using the product of our company can be exempted from the radiation safety license.
 - ◆ **Design of ultra micro leakage**
- According to the basic standard for protection against ionizing radiation and safety of radiation sources (GB 18871-2002), the exemption standard of radiation protection is $\leq 1 \mu\text{sv/h}$, and the design standard of this product is $\leq 0.5 \mu\text{sv/h}$. The radiation amount received by the operator within one year is controlled within 0.18mSv, equivalent to 1 / 10 of the radiation amount in the natural environment
- ◆ **Safety element with multiple protection**

It is equipped with Omron safety control element, triple safety protection sensor and direct connection control mode with radiation source, which fully conforms to CE specification and semi S2 / S8 specification of semiconductor industry.

Radiation Field Test :



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